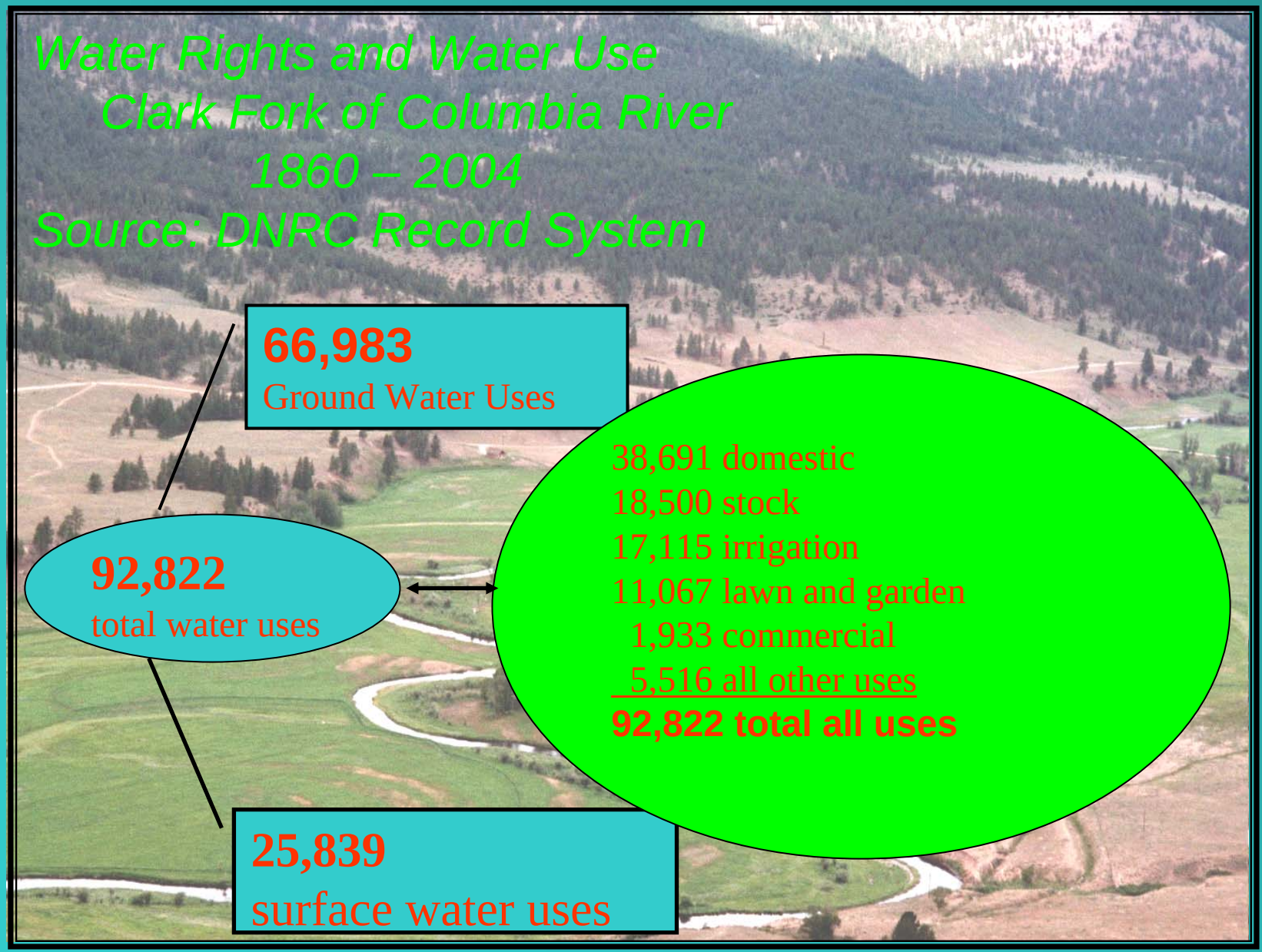
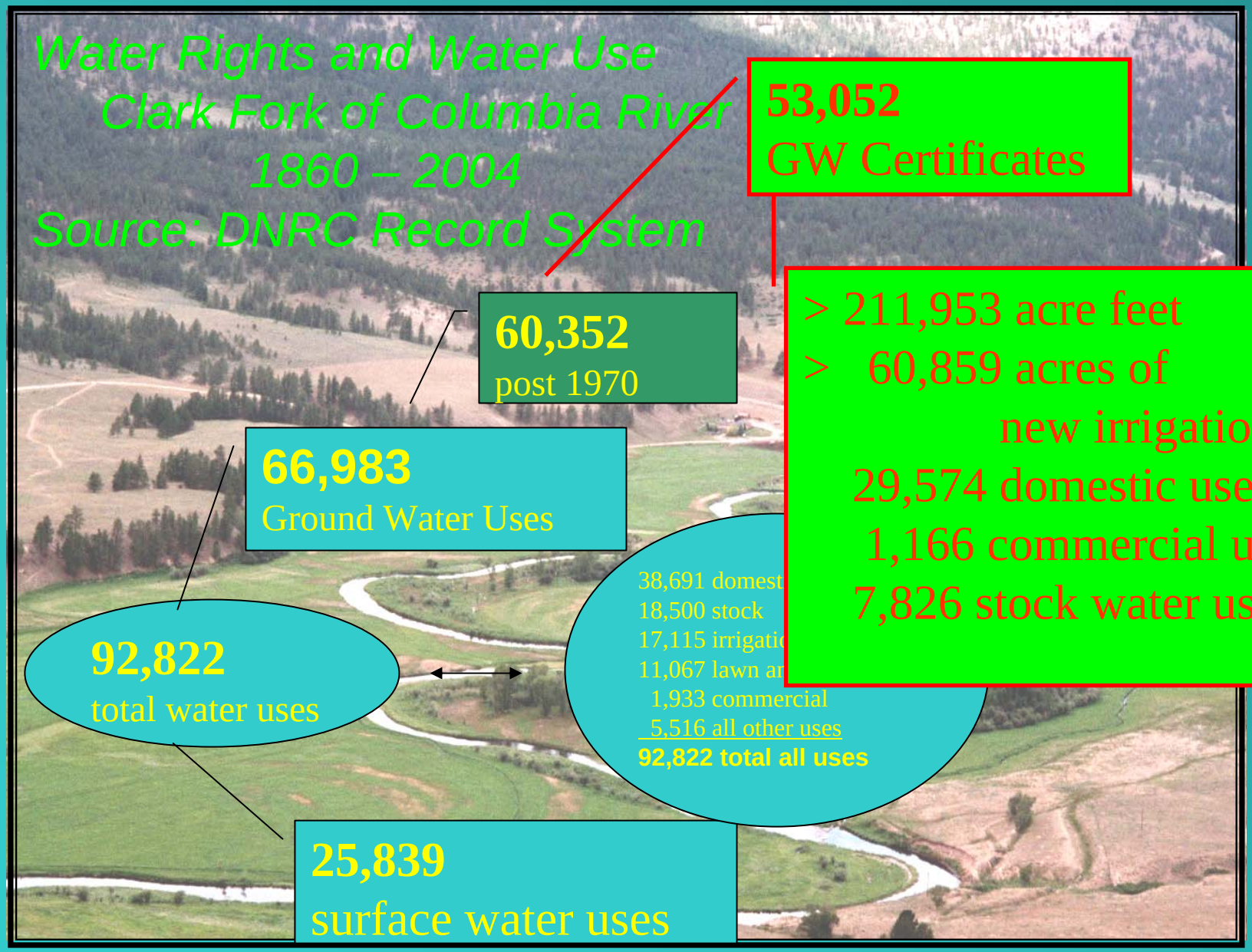
"Water for Future Projects"

Are New Approaches Needed?

Mike McLane


Water Rights and Water Use
Clark Fork of Columbia River
1860 – 2004
Source: DNRC Record System
66,983
Ground Water Uses
92,822
total water uses
25,839
surface water uses
38,691 domestic
18,500 stock
17,115 irrigation
11,067 lawn and garden
1,933 commercial
5,516 all other uses
92,822 total all uses


Water Rights and Water Use
Clark Fork of Columbia River
1860 – 2004
Source: DNRC Record System
53,052
GW Certificates
> 211,953 acre feet
> 60,859 acres of
new irrigation
29,574 domestic uses
1,166 commercial use
7,826 stock water uses
60,352
post 1970
66,983
Ground Water Uses
38,691 domest
18,500 stock
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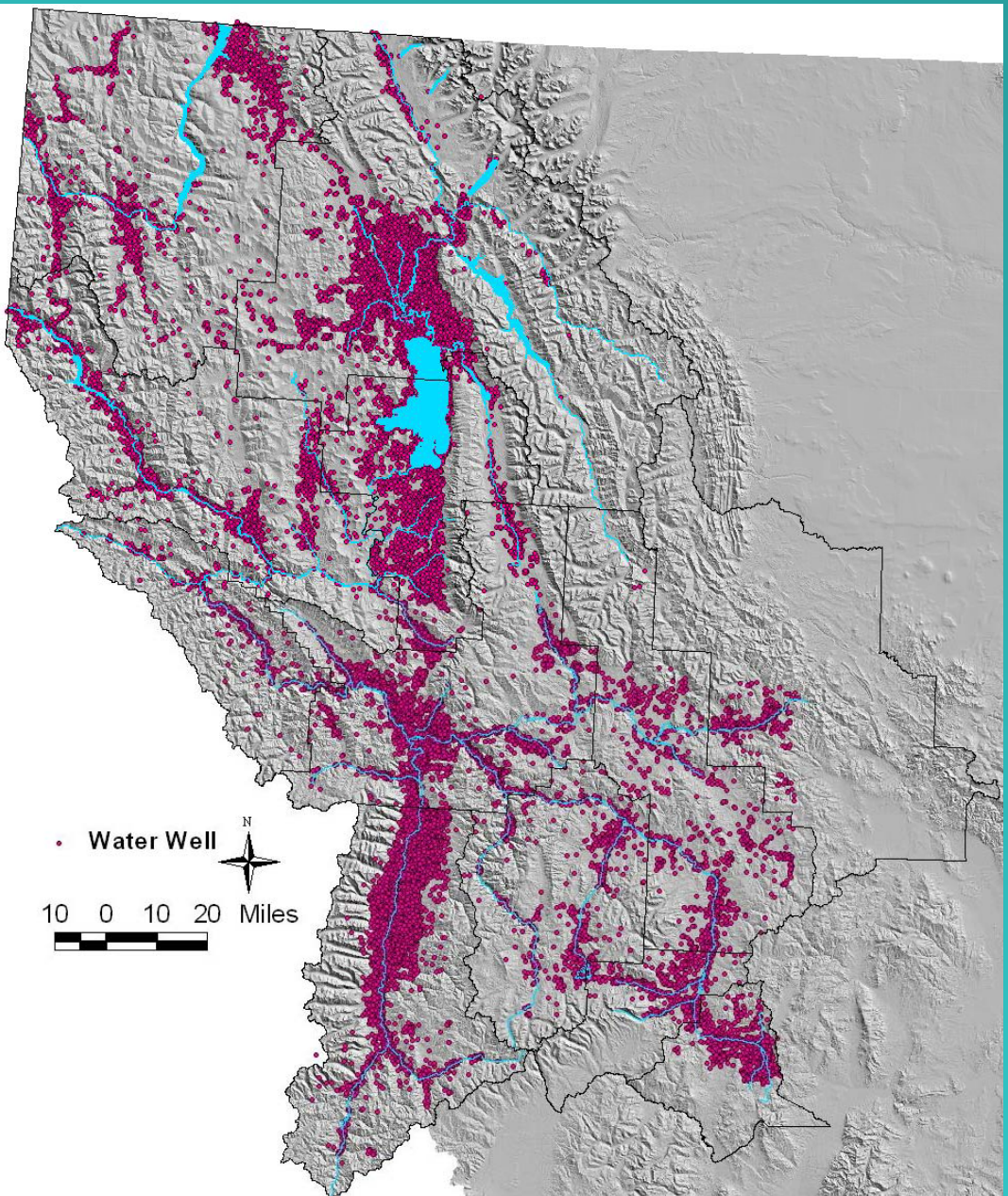
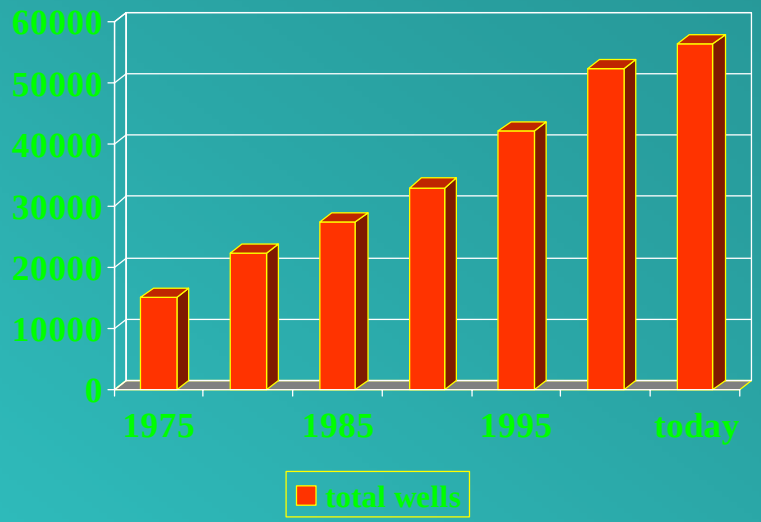
Wells in the Clark Fork Basin

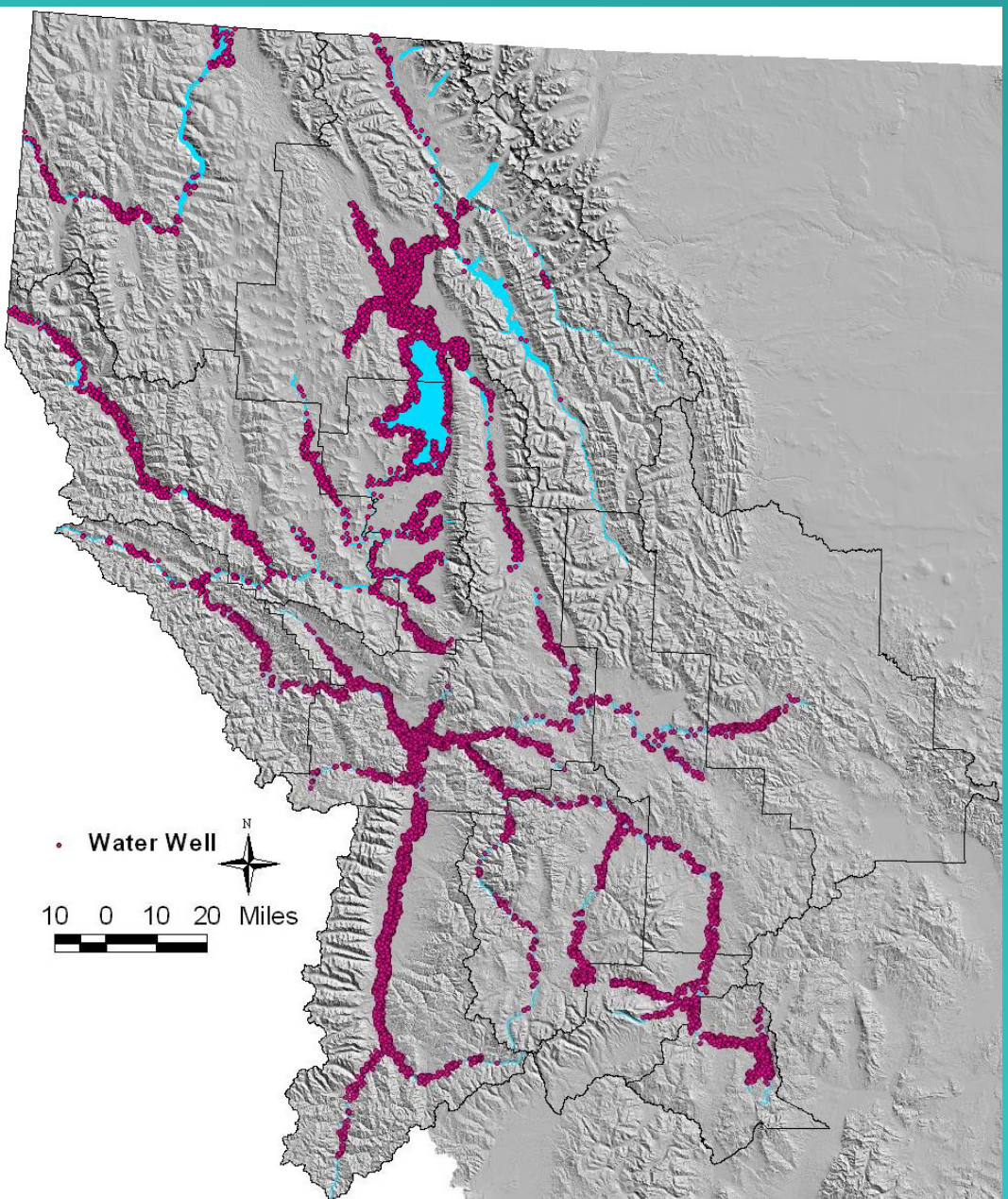


There are records of More than 58,000 wells



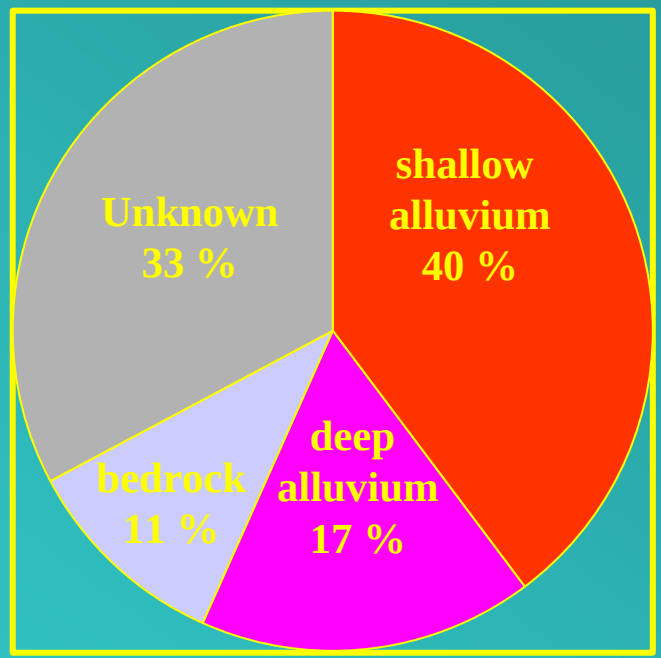
40 % of all wells have been installed since 1990

Wells Within 1 Mile of Major Streams



52 % of the wells (30,400) are located within 1 mile of streams

…most, but not all, are in shallow alluvium



Over - Appropriation

- Clark Fork River at 4 cfs

- Minimum flow for aquatic life support = 40 cfs

Basin Closures:

via

a) Legislation,
b) Adm. Rule,
c) Compacts,
&
d) Judicial Decision

Past Policy Actions

I. New Appropriations Program:

1. Permitting (new water rights)

2. Water Reservations
   (future water & instream water)

3. Changes
   (Modifying Existing Water rights)

II. Facilitating Change of Use

a. Market exchanges between pvt parties including

b. Temporary Change of Use provisions (85-2-407 MCA)

c. Salvage Statute (85-2-419 MCA)

d. Instream flow water leasing (85-2-408 and 436)

Past Policy Actions - cont.

III. Water Marketing

Water Leasing Program (85-2-141 MCA)

- State run program
- DNRC is to hold and acquire water
- Water from new or existing storage reservoirs
- Specific reference to federal reservoirs
- Limited to 50,000 acre feet
- State remarkets water via leases
- State's response to export of water and to future water supplies – not yet implemented

Past Policy Actions - cont.

IV Water Storage: Dams

- Developed state policy. (85-1-701 MCA)
- Priority to enhancements @ existing sites,
- Water Storage Account developed (get $ figure),
- Increased access to grant funds, (85-1-602 (2) MCA)

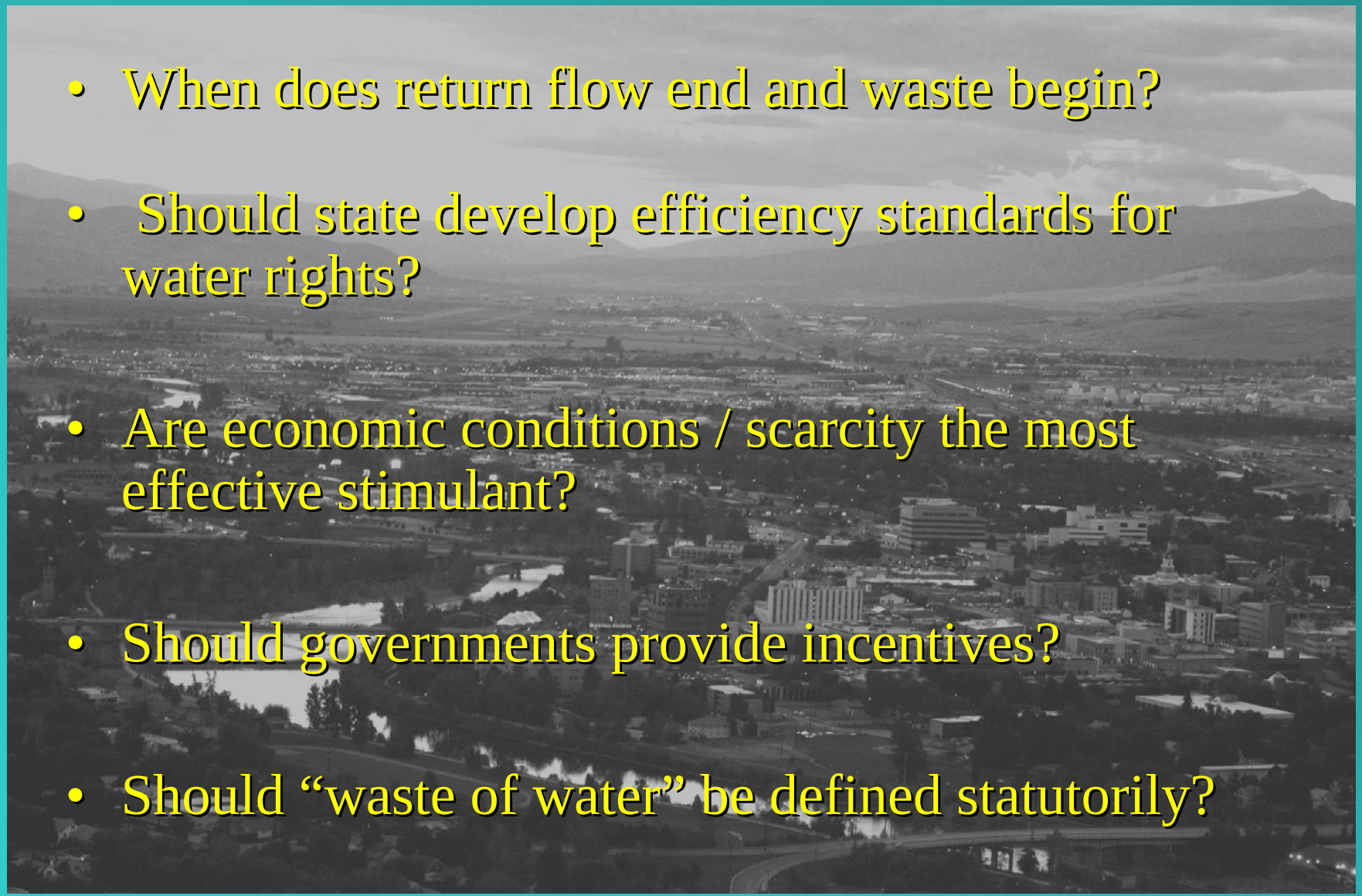
- Constraints to new storage:,
  - **High costs,**
  - **Are the best sites used (?),**
  - **Environmental Impacts,**
  - **Long term mitigation, &**
  - **Ability & Willingness to pay**

Past Policy Actions – cont.

If existing water supplies won't support new basin water uses,

Are there New Alternatives And Opportunities?

1. *Water Conservation*



- When does return flow end and waste begin?
- Should state develop efficiency standards for water rights?
- Are economic conditions / scarcity the most effective stimulant?
- Should governments provide incentives?
- Should “waste of water” be defined statutorily?

2. *Increased Administration*

Water Commissioners:

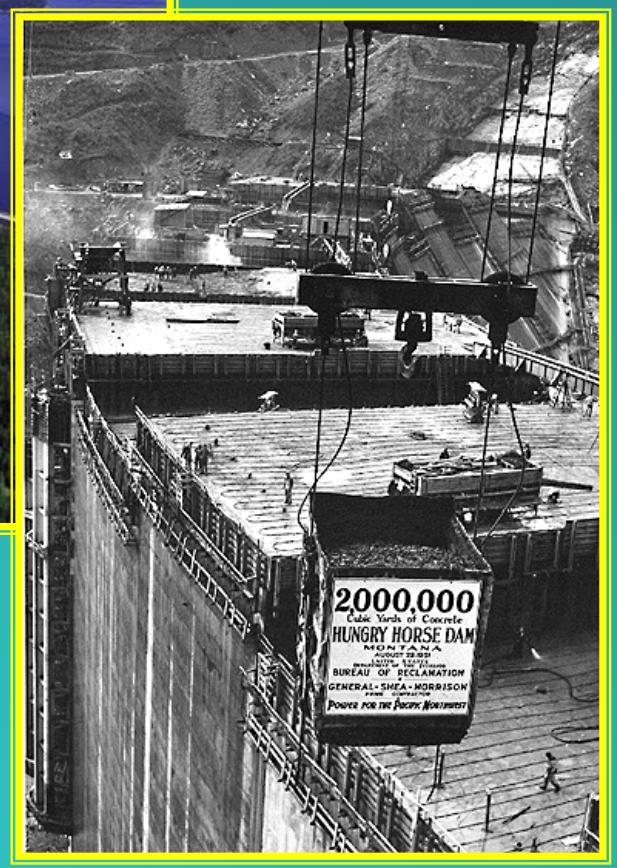
(Basin wide, Sub-basins, Stream reach)

- After Adjudication Water Rights Will Be Decreed
- Who has
  - the right to use,
  - how much water, over what period,
  - where, and for what purpose will be documented.

– All water rights will be administrable.

Discussing Water Rights, A Western Pastime

3. How About Existing Storage?



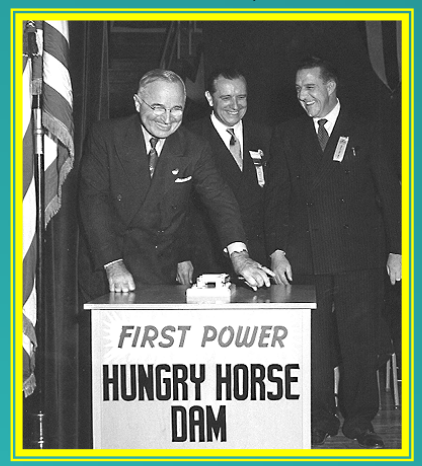
Reallocation to new uses?

House Joint Resolution 3

(2005 session)

Funding to DNRC for BOR analysis

(2007 session)



- Realities
  - Existing uses
    - (Power, flood control, fish mitigation)
  - Challenges
    - Prevent conflicts with existing use & mitigation activities,
    - $ for investigation & analysis, and
    - Marketing / contracting options.

4. Active Water Leasing Program

- Should the “state” lease water as an alternative?
- Requires acquisition of water.
  - Stored &
  - Natural Flows ?
- Lease would be
  - based on “real”, “wet”, & “secure” water rights,
  - set for adequate time to capture values,
  - charges cover costs of acquisition & mgmt.
  - easily renewed or reallocated.

5. Substitute Water Supply Plans

1. Most new uses = domestic and urban demands
2. Do NOT adapt well to prior appropriation.
3. Need a mechanism to address times of shortage.

- Substitute plan allows "out of priority use"
  - Depletions by junior use trigger plan implementation
    - In times of shortage, the Plan finds replacement water to mitigate water consumed by the junior use, and
    - Replacement is to occur in such a manner as to make the senior user whole.

a.k.a. Augmentation or Mitigation

6. "Changes of Use"

(Policy questions)

Redefine a "Change" to include or allow:

1. **Altering the Period of Diversion / Use**

2. **Method of Application Review**

   (conversions from flood to sprinkler review to assess third party affects)

3. **Allow Inefficiencies of flood irrigation to become a recognized use i.e. "ground water storage" or "augmentation".**

7. New Storage:

Ground Water Recharge

Ground Water

- “non-structural storage”
- Technical Management Issues
- Statutory Authorizations and Protection.
- Water Quality Concerns
- Geotechnical concerns

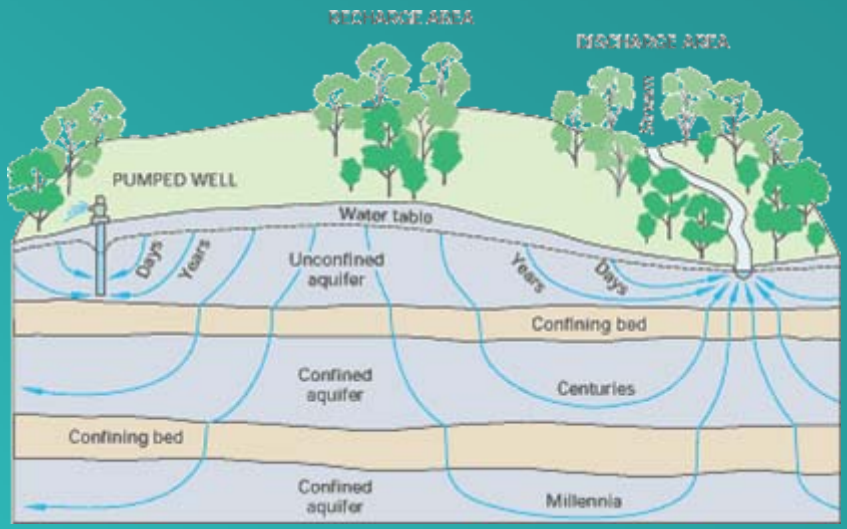
8. Water Banking

1. Facilitate the transactions of water exchanges.
2. Manage both the acquisition and marketing of water.
   - Acquire rights and lease
   - Acquire contracts from storage and "remarket"
   - Create new storage and market
   - Markets "augmentation or mitigation" credits
3. Who? (DNRC, a new entity, use Conservancy Districts)

9. Ground & Surface Water:

A single resource

- Benefits:
  1. Increased flexibility
  2. Refection of natural systems
  3. Reduces future risks



- What are our challenges?
  - May need additional system characterization.
  - Need development of quantifiable basin models.
  - Need enhanced monitoring systems.
  - Outreach and education!
  - Undoubtedly will result in legislation or litigation.

Today is an Opportunity

We can choose.

Actions will define our future

What do we want?